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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/902,622	07/12/2001	Jun Koyama	740756-2339	3008

22204 7590 02/26/2002

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MCLEAN, VA 22102

EXAMINER

BLACKMAN, ANTHONY J

ART UNIT	PAPER NUMBER
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2672

DATE MAILED: 02/26/2002

3

Please find below and/or attached an Office communication concerning this application or proceeding.

107

Office Action Summary

Application No.
09/902,622

Applicant(s)
KOYAMA et al

Examiner
Anthony Blackman

Art Unit
2672



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Sep 27, 2001
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 29-32 is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 2 20) ☐ Other: _____

Art Unit: 2672

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of SANO, US Patent No. 5,376,926.
3. Consider claims 1-28. Figure 9 (prior art), teaches active matrix type display means, plurality of switching elements, source driver circuit, gate driver circuit, signal lines, and analog buffer circuits displayed in prior art of figure 9, however, does not disclose buffer circuitry means comprising parallel TFTs.

Sano discloses buffer circuitry means comprising parallel TFTs (Figures 3-4, column 1, lines 9-15, and column 3, lines 4-45). It would have been obvious to one skilled in the art at the time of the invention to combine the prior art (Figure 9) active matrix type device's source driver circuit with buffer means containing parallel TFTs of Sano in order to lower the manufacturing costs and reduce power consumption (column 1, lines 56-57) by placing driver circuitry on one chip. Additionally, a smaller amount of space would be utilized to make the driving circuit more

Art Unit: 2672

compact. Further, the output impedance of the circuit is reduced due to the buffer circuitry arrangement.

4. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards, US Patent No. 5,335,023 in view of SANO, US Patent No. 5,376,926. Edwards teaches a means of matrix display apparatus (as to claims 1-28 refer to figure 1, element 10), row and column driver circuitry (Figure 1, elements 20 and 22, column 1, lines 5-23, 50-56, column 3, lines 19-39), however, does not disclose buffer circuitry means comprising parallel TFTs. Sano discloses buffer circuitry means comprising parallel TFTs (Figures 3-4, column 1, lines 9-15, and column 3, lines 4-45). It would have been obvious to one skilled in the art at the time of the invention to combine the buffer means containing parallel TFTs of Sano with the matrix display apparatus of Edwards in order to lower the manufacturing costs and reduce power consumption (column 1, lines 56-57) by placing driver circuitry on one chip. Additionally, a smaller amount of space would be utilized to make the driving circuit more compact. Further, the output impedance of the circuit is reduced due to the buffer circuitry arrangement.

Allowable Subject Matter

5. The following is an examiner's statement of reasons for allowance for claim 29: none of the prior art teaches or suggests (please note italicized text), an active matrix device, plurality of pixels, plurality of switching elements, circuit driver, plurality of buffer circuits (all known);

Art Unit: 2672

wherein each of the buffer circuits is arranged obliquely with respect to said direction so that a portion of at least one of the buffer circuits is positioned in a same line along said first direction as a portion of at least another one of the buffer circuits referring to embodiments four and five and figures four and five, respectively of the instant application.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Blackman whose telephone number is (703) 305-0833. The examiner can normally be reached on Monday through Friday from 8 a.m. to 4 p.m. EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi, can be reached on (703) 305-4713.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications intended for entry) Or:

(703) 746-5731 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

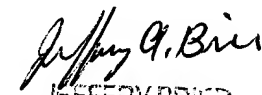
Art Unit: 2672

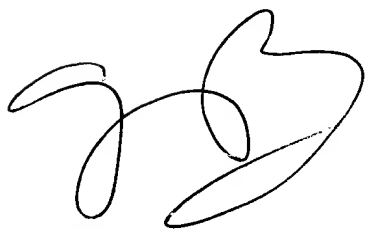
Hand-delivered responses should be brought to Crystal Park 11, 2121 Crystal Drive, Arlington.

VA.,

Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.


JEFFERY BRIER
PRIMARY EXAMINER



Patent Examiner

Anthony J. Blackman

2/21/2002